

IN THE CLAIMS

Please cancel claims 1-18 without prejudice.

Additionally, please add the following new claims 19-20 for examination upon the merits.

19. (New) A method of displaying autostereographic images, comprising:

- storing stereopair images;
- determining at least one viewing area located in front of at least two transmissive electronic displays, said displays spaced one in front of another relative to said viewing area;
- selecting one of said stored stereopair images;
- processing said selected stereopair image to produce two calculated images, each of said two calculated images containing at least some right-eye image information and at least some left-eye image information, a first one of said calculated images being adapted for a front one of said two transmissive electronic displays and a second one of said two calculated images being adapted for a rear one of said transmissive electronic displays;
- displaying each said calculated image on an appropriate transmissive electronic display, wherein each displayed calculated image acts as a mask for the other displayed calculated image; and
- backlighting said transmissive electronic displays to display a stereographic image visible in said at least one viewing area.

20. (New) The method of claim 19, wherein processing for each said calculated image comprises iteratively:

- estimating the light directed to each one of a viewer's eyes by calculating interim

calculated images for each of said transmissive electronic displays, and then determining the light directed through each discrete pixel of said front transmissive electronic display;

- comparing the estimated light for each pixel with the equivalent light from the selected one of said stereopair images to determine an error;
- adjusting said interim calculated images to reduce said error; and
- accepting said interim calculated images as said calculated images once said error for each pixel is below a set limit.

21. (New) The method of claim 20, wherein said processing of said selected stereopair image is performed by an artificial neural network.

22. (New) The method of claim 19, wherein said at least one viewing area is determined by a calculation responsive to a sensed viewer position signal.

23. (New) The method of claim 19, wherein said calculated images are processed according to a plurality of viewing zones in said viewing area.

24. (New) The method of claim 19, further comprising selecting a plurality of said stored stereopair images for display to a plurality of viewing zones in said viewing area, and wherein said two calculated images are produced by processing said selected stereopair images.

25. (New) The method of claim 19, further comprising positioning a mask between said transmissive electronic displays, said mask being adapted to suppress Moiré patterns.

26. (New) The method of claim 25, wherein said mask comprises a diffuser.
27. (New) The method of claim 19, wherein said displays are selected from the group consisting of liquid crystal displays, gas plasma displays, and organic light emitting polymer displays.
28. (New) The method of claim 19, wherein said selecting of said one of said stereopair images is performed according to said determined viewing area, and wherein movements of said selected viewing area impacts said selecting of said one of said stereopair images.
29. (New) A system for displaying autostereographic images, comprising:
- storage means containing a plurality of stored stereopair images;
 - at least two electronic displays;
 - at least one viewing area in front of said at least two transmissive electronic displays, said displays spaced one in front of another relative to said viewing area;
 - means for selecting one of said stored stereopair images;
 - means for processing said selected stereopair image to produce two calculated images, each of said two calculated images containing at least some right-eye image information and at least some left-eye image information, a first one of said calculated images being adapted for a front one of said two transmissive electronic displays and a second one of said two calculated images being adapted for a rear one of said transmissive electronic displays;
 - means for displaying each said calculated image on an appropriate transmissive

electronic display, wherein each displayed calculated image acts as a mask for the other displayed calculated image; and

- means to backlight said transmissive electronic displays to display an autostereographic image visible in said at least one viewing area.

30. (New) The system of claim 29, wherein said means for processing each said calculated image comprises iterative means to:

- estimate the light directed to each one of a viewer's eyes by calculating interim calculated images for each of said transmissive electronic displays, and then determine the light directed through each discrete pixel of said front transmissive electronic display;
- compare the estimated light for each pixel with the equivalent light from the selected ones of said stereopair images to determine an error;
- adjust said interim calculated images to reduce said error; and
- accept said interim calculated images as said calculated images once said error for each pixel is below a set limit.

31. (New) The system of claim 30, wherein said means for processing is an artificial neural network.

32. (New) The system of claim 29, further comprising a viewer position sensor to determine at least one viewing area.

33. (New) The system of claim 32, wherein said means for selecting said one of said

stereopair images selects according to said determined viewing area, and wherein movements of said selected viewing area impacts said selecting of said one of said stereopair images.

34. (New) The system of claim 29, wherein said means for processing is further adapted to process said calculated images such that they can be displayed to a plurality of viewing zones in said viewing area to create an autostereographic image visible in said viewing zones.

35. (New) The system of claim 29, wherein said means for selecting is adapted to select a plurality of said stored stereopair images, and where said means for processing is further adapted to process said plurality of selected stereopair images to calculate said calculated images such that they can be displayed to a plurality of viewing zones in said viewing area to create a plurality of aspects of an autostereographic image visible in said viewing zones.

36. (New) The system of claim 29, further comprising a mask positioned between said transmissive electronic displays, wherein said mask is adapted to suppress Moiré patterns.

37. (New) The system of claim 36, wherein said mask is a diffuser.

38. (New) The system of claim 29, wherein said displays are selected from the group consisting of liquid crystal displays, gas plasma displays, and organic light emitting polymer displays.